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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,522	11/05/2003	Tommy Hansen	H0610.0355/P355	9436
24998	7590	03/18/2008		
DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER HYUN, PAUL SANG HWA	
			ART UNIT	PAPER NUMBER
			1797	
			MAIL DATE	DELIVERY MODE
			03/18/2008 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Advisory Action  
Before the Filing of an Appeal Brief**

**Application No.**

10/700,522

**Applicant(s)**

HANSEN ET AL.

**Examiner**

PAUL S. HYUN

**Art Unit**

1797

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 29 February 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/Jill Warden/  
Supervisory Patent Examiner, Art Unit 1797

Continuation of 11, does NOT place the application in condition for allowance because: Applicant's arguments are not persuasive. Applicant provides numerous arguments as to why the art rejections cited in the previous Office action are not tenable. The arguments will be addressed in the order that they were presented in the reply filed on February 29, 2008.

1) Applicant's arguments with respect to the rejection of claims 1 and 7:

A) Applicant argues that Öttilé does not disclose a metallic basket. This argument is not persuasive. Öttilé discloses foil sheets 30 and 32 as well as flanges 34 and 36, which together define the claimed metallic basket in terms of both structure and function. According to the claims, the claimed basket comprises an inlet channel, sidewalls and a bottom that extends in a direction transverse to the inlet channel. Figures 1 and 2 of Öttilé show that foil sheets 30 and 32 surround the sides of the catalyst bed such that the sheets define an inlet and an outlet. Figure 4 of Öttilé further shows that the metallic foils 30 and 32 are bent and extend in a direction transverse to the inlet channel, defining a bottom. Öttilé discloses that the bent portions of the metallic sheets aid in the axial retention of the catalyst bed (see lines 1-10, col. 3), meaning that the metallic sheets function as a basket.

B) Applicant also argues that there is no motivation to combine Öttilé with the teachings of Dunster. This argument is not persuasive. Dunster was relied upon for its disclosure that it is well known in the art to conduct partial oxidation of hydrocarbons using a catalyst reactor. One of ordinary skill in the art would recognize that the reactor disclosed by Öttilé can be used to conduct other type of reactions, and in light of the disclosure of Dunster, it would have been obvious to carry out partial oxidation of hydrocarbons using the Öttilé reactor by substituting the catalyst bed disclosed by Öttilé with the catalyst bed (i.e. Pt-Pd catalyst bed) disclosed by Dunster.

C) Applicant also argues that there is no motivation to combine Öttilé with Ravault. This argument is not persuasive. Ravault was relied upon for its disclosure of a ceramic coating that renders the walls of a catalyst bed impermeable. The ceramic coating is designed to confine gas within the catalyst bed. It would have been obvious to one of ordinary skill in the art to apply the teachings of Ravault to other types of reactors, including the reactor disclosed by Öttilé. Although the reactor disclosed by Öttilé already comprises impermeable foil sheets that are designed to confine gas within the catalyst bed, Öttilé provides motivation for providing more than one layer of foil sheets to insure impermeability (see lines 67-68, col. 2). That said, it would have been obvious to reinforce the sheets with the ceramic coating.

D) Applicant argues that the reactor disclosed by Öttilé is not suitable for carrying out catalytic partial oxidation (CPO) of hydrocarbons on an industrial scale. Specifically, Applicant argues that CPO of hydrocarbons requires reactions to be carried out at elevated temperatures and pressure, which the reactor disclosed by Öttilé is not designed to handle. Moreover, Applicant argues that the Öttilé reactor is small and thus not suitable for conducting CPO on an industrial scale. With respect to the elevated pressure and temperature, it should be noted that CPO of hydrocarbons does not necessarily have to be conducted at elevated pressure. This issue was already addressed in the previous Office action and thus will not be repeated here (see Response to Arguments section of Final Office action mailed on 10/30/07). With respect to the size of the reactor, the claims are silent with respect to the size of the claimed invention, and there is no evidence that suggests that CPO cannot be carried out on a smaller scale. Therefore, it appears that the reactor disclosed by Öttilé is capable of conducting CPO of hydrocarbons as long as the proper catalyst bed is provided.

2) Applicant's arguments with respect to the rejection of claims 3-5:

Applicant argues that Mentschel does not disclose a heater that is installed on the outer surface of a reaction chamber, but inside the reactor. Specifically, Applicant argues that while Mentschel does disclose a heater associated with a reactor, the heater is situated outside of the reactor. This argument is not persuasive because it appears that Applicants mischaracterized the disclosure of Mentschel. As discussed in the previous Office action, the heater disclosed by Mentschel is positioned within a reactor wherein the reactor encompasses the entire structure shown in Figure 2. It appears that Applicants interpreted the reactor to be delimited by wall 101 when in fact wall 101 delimits the reaction chamber.

3) Applicant's arguments with respect to the rejection of claims 8 and 9:

Applicant argues that reliance on Hahn et al. is inappropriate because Hahn et al. disclose the temperature at which full oxidation of hydrocarbons occur, not partial oxidation as recited in the claims. This argument is not persuasive because it appears that the difference between catalytic full oxidation and catalytic partial oxidation is determined by the ratio of the reactants and the catalyst used in the reaction, not the temperature at which the reaction occurs. Therefore, it appears that the temperature range disclosed by Hahn et al. is a conventional temperature range for conducting partial oxidation of hydrocarbons.

4) Applicant's arguments with respect to the rejection of claim 10:

Applicant argues that reliance on the disclosure of Werges is inappropriate because the load capacity of the grid disclosed by Werges is insufficient for purposes of conducting CPO of hydrocarbons. This argument is not persuasive due to lack of evidence showing the difference in load capacity required for the reaction disclosed by Werges and the load capacity required for conducting CPO of hydrocarbons.